Deetman shows in Table 11 several hydraulic fluids. Applicants discovered that some of these will meet performance requirements at high pressure and some will not. Deetman did not recognize that any of these fluids would or could work at higher pressure (i.e., pressures above 4,000 psi) and what enables some of these fluids to operate at higher pressure. Therefore Deetman's disclosure is merely generic to fluids in general for use in the lower pressure systems at a range of temperatures which where employed in aircraft hydraulics at the time. All else is left to experimentation.

Although phosphate ester aviation hydraulic fluids were available at the time of the Deetman patent, no one used any of them in high pressure applications. There was and continues to be a long standing need for high pressure systems. Even so, until the present invention, it was believed that phosphate esters would not work in high pressure systems. This can be seen by the use of much more expensive silicone-based fluids in the Concorde. Even though less costly than alternatives, phosphate esters were also not used in high pressure systems military aircraft. Obviousness under §103 requires a reasonable expectation of success. Prior to this invention, no one expected phosphate esters to work in high pressure systems and went to great expense to use other fluids. The very fact that *all* high pressure systems used alternative fluids instead of phosphate esters, constitutes that the hydraulic system community actually taught away from using phosphate ester fluids in high pressure applications.

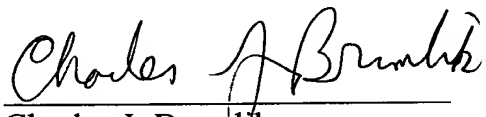
The Examiner cites *King*. However, unlike *King* not all of Deetman's fluids would perform at high pressure. Also unlike *King*, Applicants are not using the material in the same environment. A 5,000 psi system does not function in the same way as a 3,000 psi system. Both high pressure systems and the fluids they contain have different performance characteristics than low pressure systems and are subject to different stresses, corrosion, erosion, and other deterioration. That is why different fluids, pumps, maintenance and system components are used.

Use in 4,000 to 5,000 psi and above is not inherent in Deetman since Deetman does not discuss high pressure systems, pressure effect, or even any mention of pressure at all. Deetman only discloses fluids for use in lower pressure systems that were used at the time with a possibility of a variety of temperatures. However, temperature effects on hydraulic fluids and systems is not the same as pressure effects.

Applying a *Graham v. John Deere* review, (1) as the Examiner pointed out, the scope of the prior art does not even discuss pressure; (2) the present invention claims high pressure applications, (3) at the time the invention was made, no phosphate ester aviation hydraulic fluids were considered applicable at high pressure, and (4) Deetman did not foresee or suggest this application even though high pressure systems existed at the time (e.g., Concord used silicone fluids) and there was long felt need for more cost effective fluids.

Applicants believe that the present invention is not obvious over Deetman. Reconsideration of the application as amended is respectfully requested.

Respectfully submitted,



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[X] Pursuant to 37 CFR 1.34(a)

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

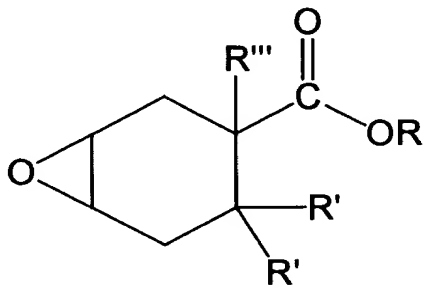
Please add new claims 13-19 as follows:

13. The method of claim 3 wherein the trialkyl phosphate is tri n-butyl phosphate.

14. The method of claim 3 wherein the trialkyl phosphate is triisobutyl phosphate.

15. The method according to claim 11 wherein the antioxidants can be aminic or phenolic or a mixture of the two.

16. The method of claim 12 wherein the acid control additive is of the formula



wherein R is selected from the group consisting of an alkyl group of from 1 to 10 carbon atoms optionally containing from 1 to 4 ether oxygen atoms therein and cycloalkyl of from 3 to 10 carbon atoms, each R' is independently selected from the group consisting of hydrogen, alkyl of 1 to 10 carbon atoms and -C(O)OR" where R" is alkyl of from 1 to 10 carbon atoms and 0 to 4 ether oxygen atoms therein or cycloalkyl of from 3 to 10 carbon atoms, and R''' is selected from the group consisting of hydrogen, alkyl of from 1 to 10 carbon atoms and -C(O)OR" where R" is alkyl of from 1 to 10

carbon atoms optionally containing from 1 to 4 ether oxygen atoms therein or cycloalkyl of from 3 to 10 carbon atoms.

17. The method of claim 12 wherein the erosion inhibitor is a perfluoroalkyl or perfluorocycloalkyl sulfonic acid, or a metal salt of the same, or mixture of these sulfonic acid acids and metal salts, where the alkyl groups encompass 1 to 10 carbon atoms and the cycloalkyl groups from 3 to 10 carbon atoms.

18. The method according to claim 12 wherein the viscosity index improver is a poly(alkyl acrylate) or poly(alkyl methacrylate) esters having a molecular weight in the range from 45,000 to 100,000.

19. The method of claim 3 wherein the trialkyl phosphate is a mixture of tri n-butyl phosphate and triisobutyl phosphate.